ST. BARTHOLOMEW'S

HOSPITAL JOURNAL

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"Why," said a towering sergeant of the City of London Police in a tone that brooked no argument, "is it that students all over the world are so irresponsible?" The remark, occasioned by the recent incident of the Lord Mayor *versus* Percy, was offered in a friendly but none the less authoritative manner, and, discretion being at times the better part of valour, it was perforce accepted at its face value. It has, however, remained buried like a thorn in the subconscious; no student, who of all people is the most sensitive to disparaging remarks, appreciates being dubbed irresponsible, and this column, believing that chivalry is not yet dead, feels compelled to enter the lists on behalf of Students *versus* the City of London Police. It is to be regretted that a full-scale tournée attended by a conclave of the City aldermen might not be held on the steps of St. Paul's, for, after all, it was over the body of that fair princess the Lord Mayor that the whole trouble arose. However, we have been told in all good faith that the pen is mightier than the sword, and the forceful logic of that axiom is well brought home when the opposition bids fair to be a 6 ft. 4 in. tall sergeant of the City Police.

To raise the argument to the higher levels of Philosophy, one may say with grandiose obscurantism that *au fond* it is merely a matter of relativity. Conventions of responsibility or irresponsibility are determined, one must assume, by that comforting conglomeration "the masses."

True, a sergeant of police can eminently be regarded as an oracle of conventional correctness, but in matters of philosophy he may be excused his duties; nevertheless, since he embodies in his person the offices of law and order and thereby, one imagines, the wishes of these "masses," the community must not grumble if his words are taken as an expression of its opinion. Should we one morning wake up to find that the population of Greater London, with the exception of the City of London Police, had metamorphozed overnight, like caterpillars, into a variety of student forms, the same sergeant would discover the sentiments of his remark a little out of tune with those of his employers. His job accordingly would then be "to promote and assist to the best of his ability all forms of student rags and demonstrations with which he might have to do." No doubt such a *volte face* could be well accommodated by his English genius for compromise without upsetting the proverbial legend of unshakable dignity which so becomingly surrounds our British police forces; unfortunately, the likelihood of such a metamorphosis is, one feels, depressingly distant. To promote a decent respect for the student in the expanse of a police sergeant's magisterial breast, attack must proceed along more subtle lines. Different parties might hold different views on the form which would prove the most fruitful. No doubt the hospital rugger team, assisted by the delights of the now extinct vicarage, could inspire our allegorical sergeant to a state of bibulous amiability, in which condition he might swear to make all his superiors eat their helmets should they so much as drop the most veiled aspersion on the responsibility of students in his presence. With all due deference to the rugger club, however, one might justifiably feel that the confidence so inspired in the responsibility of students, and more especially medical students, might suffer a slight reverse next morning while their new convert stood in the dispensary queue for his "migrane" pills.

No, one's scheme of attack should proceed upon lines of quiet suggestion. It would be a

daring and possibly successful move to conduct our sergeant over the hospital one morning commenting lightly upon the busy passage of each student as he makes his way to "Diviani's," the "White Hart," or even the refectory; any mention of their destination would naturally be in the worst taste. "How," one would demand in earnest tones, "is it that the lives of hundreds of patients are entrusted to the gentle care of students if they are to be found wanting in responsibility?" "Look," one would adjure him, "at the tattered library volumes and the cracked museum cases," silent witnesses to Hurculean labours. "There," one would point with a triumphant finger, "you have the results of hard-working responsible students." This particular sergeant would know little of hospitals or students.

At this point one must digress to anticipate some objections to the *grand tour* which would surely arise. Can one judge the responsibility of students throughout the country by the character of those found at Bart.'s? An assumption such as this would not pass without provoking a flood of modest protestation from other hospitals and student bodies. "Pish" would be the gracious reply, "but, of course, your students are as good as ours"; it would be agreed unanimously that on behalf of such a cause a little friendly flattery would not be misplaced.

If such a scheme would fail to convince the sergeant of the injustice of his statement one would be forced to loose the last weapons of one's armoury upon him in the form of poesy, for romanticism often hides beneath the bleakest of exteriors; the following might well tip the scales:—

"*When from his classic dreams the student steals*
Amid the buzz of crowds, the whirl of wheels,
To muse unnoticed, while around him press
The meteor forms of equipage and dress.
Alone in wonder lost he seems to stand,
A very stranger in his native land."

"—so true" one would add in reminiscent tones "of students all over the world."

Should success still not be forthcoming, then, surely, long ingrained prejudice would be the only explanation for failure.

PROFESSOR SIR JAMES PATERSON-ROSS, K.C.V.O.

The JOURNAL offers its sincere congratulations to Professor J. Paterson-Ross on his appointment as a Knight Comander of the Royal Victorian Order for services rendered to the King during his recent illness.

We must also congratulate Mr. J. C. Longland on his appointment as a Member of the Royal Victorian Order for services rendered in the same cause.

CLINICAL VALUE OF ELECTROENCEPHALOGRAPHY

By J. W. ALDREN TURNER, D.M., F.R.C.P.

THE electroencephalogram is a valuable accessory investigation in certain neurological problems when it is considered in relation to the clinical aspects of the case. Without adequate consideration of the history and findings on clinical examination it is largely valueless and may be misleading. Though electrical activity in animal brains had been recorded previousy, Berger in 1929 was the first to record the electrical activity of the human brain through the intact skull, using a Siemens galvanometer. The deflections were very small and it was only when adequate means of amplification had been developed, largely by Adrian and Matthews at Cambridge, that study of the human E.E.G. became possible.

METHOD OF RECORDING:

From the patient's point of view there is no discomfort during the recording of the E.E.G. He lies comfortably on a couch, as far as possible cut off from noise and other distractions. Saline pad electrodes are placed on the unshaved scalp after the hair has been carefully separated at the points of contact, and the small electrical potentials are amplified by condenser-coupled amplifiers, the actual record being made by ink-writing oscillographs. Each line of the record represents the potential difference between an adjacent pair of electrodes. Three or more channels are used at the same time, and by moving the electrodes or by special wires and switches the whole of the head can be examined systematically.

The E.E.G. is usually recorded at least three hours after the patient's last meal, as some abnormalities are more likely to be present with a low blood sugar. Alkalosis also tends to bring out abnormalities in epileptics, and at the end of the recording of the resting record the patient is asked to breathe in and out deeply for three minutes and the E.E.G. recorded during this period and for two to three minutes afterwards, for comparison with the resting record.

THE NORMAL ELECTROENCEPHALOGRAM:

The dominant feature of the normal E.E.G. is the alpha or Berger rhythm. This consists of waves with a frequency of 8-13 cycles a second arising in the occipital region, 10 a second being the commonest frequency. In the majority of subjects the rhythm is only present when the eyes are closed and the mind undistracted. When the eyes are opened or when the patient tries to think out a problem the alpha waves are inhibited (Fig 1). There is some variability from person to person in the development and frequency of the alpha rhythm but it is relatively constant in its characteristics in any one person. Though most commonly it is confined to the occipital region, in some people it may be recorded from more anterior parts of the brain. Before the age of 5 the E.E.G. is too unstable to be of any practical value and there is frequently some instability up to the age of 14 or even later.

Minor abnormalities may be found in the E.E.G. of apparently normal people in whom there is no clinical evidence of cerebral disease; Williams found non-specific abnormalities in 5 per cent. of highly selected air-crew personnel in the R.A.F., in 10 per cent. of unselected Army personnel, and in 26 per cent. of 148 patients suffering from psychoneurotic conditions, and he suggested that these abnormalities indicated an inborn

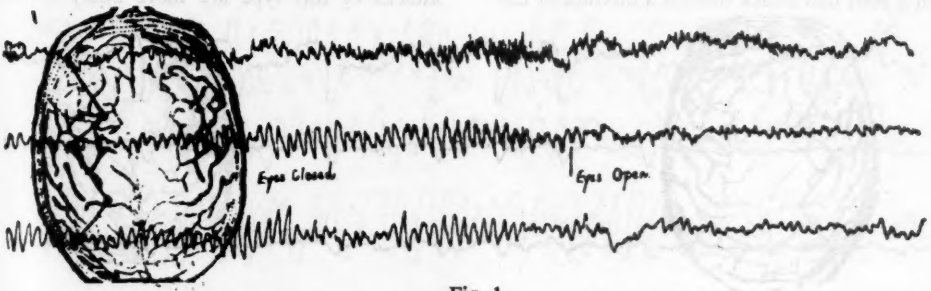

Fig. 1

A 9 c/sec. alpha rhythm in the posterior two channels. The regular alpha rhythm stops when the eyes are opened.

constitutional abnormality affecting the central nervous system.

There are certain artefacts which may appear in the E.E.G.: muscle action potentials from the scalp muscles may give fast waves, particularly in the frontal leads which are easily recognised (Fig. 2), and blinking may cause slow high-voltage waves which may appear in bursts (Fig. 3). The source of these latter waves can be determined by watching the patient during the recording.

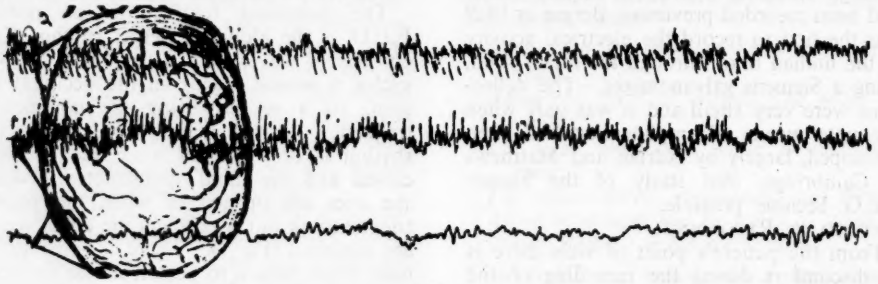

Fig. 2

Artifact caused by muscle action potentials in the frontal and temporal muscles. The muscle activity causes rapid waves most evident in the anterior two leads.

THE E.E.G. IN PATHOLOGICAL CONDITIONS:

Epilepsy. The diagnosis of epilepsy is made most certainly by seeing an attack or by obtaining an adequate account of an attack from a reliable observer, but definite help in the diagnosis can in some cases be obtained from E.E.G. records.

During an epileptic attack there are always abnormal waves in the E.E.G. In a major attack there are fast waves, up to 25-30 a second of high voltage, and prior to the onset of the clinical attack these waves rapidly increase in size and frequency. In psychomotor attacks or epileptic equivalents the typical wave form is a burst of four to six a second flat-topped waves (Fig. 4) while in a petit mal attack there is a mixture of fast and slow activity, the typical record being a paroxysmal outburst of "wave and spike" complexes which consist of a quick, sharp spike followed by a slow round-topped wave (Fig. 5). From the clinical point of view, however, the E.E.G. between attacks is more important than the findings during an attack, as the chances of a patient having a clinical epileptic attack while the record is being made are obviously very small. It must be emphasised that in about 25 per cent. of undoubted epileptics there is no abnormality in the E.E.G. record between seizures, so a normal E.E.G. in no way rules out the diagnosis of epilepsy. In the remaining 75 per cent. a variable proportion show E.E.G. abnormalities, particularly instability of rhythm, which are non-specific and neither confirm nor disprove the diagnosis of epilepsy. In possibly 50 per cent., though this figure varies in different published series and with the type of epileptics being investigated, the E.E.G. helps to confirm the diagnosis. The characteristic abnormality is the occurrence of paroxysmal bursts of waves of the types already described as occurring during clinical seizures. Sub-clinical attacks of this type are more likely to be

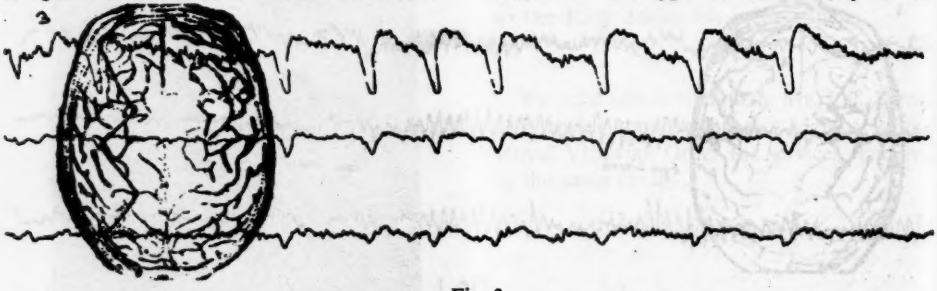

Fig. 3

Artifact caused by rapid blinking. Rhythmic slow waves appear in the frontal leads. The cause of these can be determined by watching the patient during the recording.

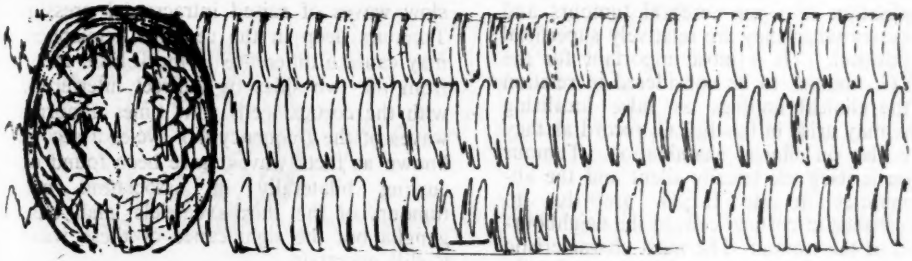

Fig. 4

Bursts of high voltage flat topped waves associated with "psycho-motor epilepsy" or epileptic equivalents.

found in patients who suffer from clinical petit mal than in those who only have occasional major attacks. Though stress has been laid on the different types of waves associated with various types of epileptic attack, this differentiation is by no means absolute and it is not uncommon to find wave and spike complexes in the inter-seizure records of patients who have major attacks and apparently do not have clinical petit mal.

The diagnostic wave-forms of epilepsy may not be present in the resting record but may occur when alkalosis is produced by three minutes over-breathing, and this should always be carried out during the recording of the E.E.G. of suspected epileptics.

On the whole, more diagnostic records are obtained when the patient is not taking any anti-epileptic drug such as Pheno-barbitone, but in my opinion drugs of this type should not be stopped for the purpose of recording the E.E.G., as in any epileptic when therapy is stopped suddenly there is a danger of an outburst of fits and sometimes even status epilepticus.

Interesting results have been found when E.E.G. records were made on the relatives of patients with epilepsy: abnormal records were found in 60 per cent. of the relatives of a series of 94 epileptics as compared with 10 per cent. of a control group of 100 persons with no family history of epilepsy (Lennox, Gibbs and Gibbs, 1940). When records were taken from the parents of known epileptics, in 35 per cent. the E.E.G. was abnormal in both parents, and in only 5 per cent. did both parents have normal records.

Space-occupying lesions. Raised intracranial pressure is usually associated with slow waves, of about three cycles a second arising from all areas of the cortex (Fig. 6). There is no exact correlation between the height of the intracranial pressure and the appearance of these waves. It is thought that they are due to oedema of the brain rather than raised intracranial pressure in itself, as they can frequently be abolished temporarily by intravenous injection of hypertonic solutions but not by lowering the intracranial pressure by removal of cerebro-spinal fluid. Generalised slow waves of a similar type may be associated with other conditions interfering with cortical function such as surgical anaesthesia and coma from various causes.

The E.E.G. is of undoubted value in the

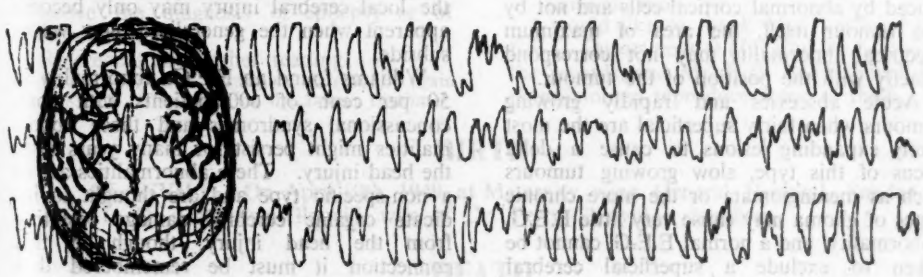

Fig. 5

Typical "spike and wave" formations of *petit mal*. This record was made during a clinical *petit mal*.

localisation of some cerebral tumours and abscesses when they are relatively superficial in position. It is most important for the E.E.G. findings to be considered in relation to the clinical findings as false localising signs may arise in the E.E.G. record as they may also on clinical examination. Tumour tissue is itself electrically silent and the abnormalities in the E.E.G. are due to disturbance of cortical cells in the neighbourhood of the tumour. The most characteristic finding in the presence of a superficially placed cerebral tumour is a focus of 2 - 3 cycles a second waves of high voltage, usually known as delta waves. The most accurate method of localisation is by finding "phase-reversal" which means that the deflections in the E.E.G. are in opposite directions about a peak potential (Fig. 7). This is done by finding the area from which delta waves are arising with the standard recordings and then altering the position of the electrodes and placing them in places at right-angles to one another till phase reversal can be demonstrated. In some cases this is not possible and reliance has to be placed on finding the area with the maximum intensity of slow waves. As the abnormal waves are produced by abnormal cortical cells and not by the tumour itself, the area of maximum electrical abnormality may not correspond exactly with the position of the tumour.

Acute abscesses and rapidly growing tumours when fairly superficial are the most likely expanding lesions to cause a delta focus of this type, slow growing tumours such as meningiomata or the more chronic types of glioma may cause very little E.E.G. abnormality, and a normal E.E.G. cannot be taken to exclude a superficial cerebral tumour.

Tumours in the posterior fossa do not cause E.E.G. abnormality except the diffuse slow waves of raised intracranial pressure. Tumours deep in the cerebral hemispheres may cause a difference in the E.E.G. record from the two sides by indirect interference with the cortical cells. At times abnormal waves of the frequency 4-7 cycles a second, known as theta waves, have been found occurring bilaterally in association with tumours of the third ventricle and basal ganglia but the significance of these waves is still uncertain.

Head injuries. A blunt head injury with concussion causes generalised slow waves in the E.E.G.; the length of time these persist varies with the severity of the injury. Generally clinical and E.E.G. improvement correspond fairly closely but in some patients an E.E.G. abnormality may persist after the patient is free of symptoms and physical signs, and it is thought that there is more likelihood of relapse of symptoms in this group of patients.

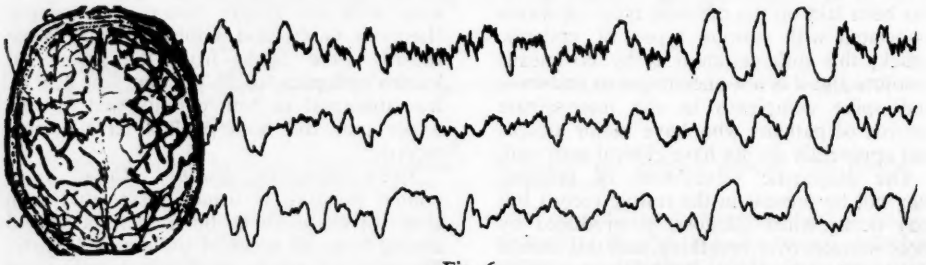

Fig. 6

From a patient with raised intra-cranial pressure. There are irregular high voltage slow waves varying to some extent in frequency.

Localised injuries may cause a focus of delta waves similar to the focus found with a superficially placed tumour and in patients in whom there has been concussion in addition to the focal injury E.E.G. evidence of the local cerebral injury may only become apparent when the generalised slow waves subside.

Williams found an E.E.G. abnormality in 50 per cent. of 600 patients with post-concussional syndromes and these abnormalities might persist for many years after the head injury. These abnormalities are of a non-specific type and are thought to indicate organic cerebral damage resulting from the head injury, though in this connection it must be remembered that slight E.E.G. abnormalities are found in about 10 per cent. of apparently normal people.

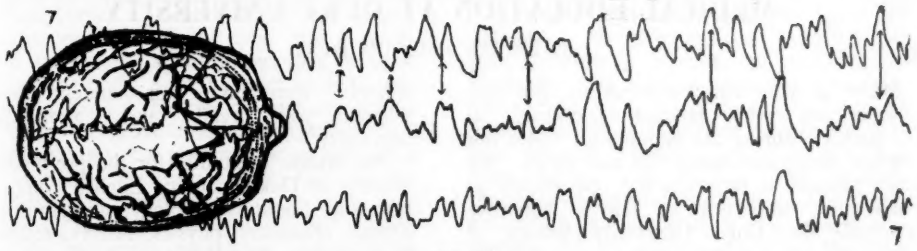

Fig. 7

Delta wave focus in the left posterior frontal region. "Phase reversal," indicated by the arrows, is seen in the first and second channels. This shows that the focus of origin of the delta waves is approximately under the electrode common to these two channels.

CEREBRAL VASCULAR DISEASE:

In general, normal E.E.G. records are found in cerebral vascular disease, though occasional cases show a focus of delta waves.

CONCLUSIONS:

It has only been possible to indicate briefly some of the conditions in which E.E.G. examination may be of help when considered in association with the whole clinical picture. There are many other aspects of electroencephalography in which interesting results have been obtained. It is an important instrument for research in neuro-physiology; much of interest has been learned in connection with various psychiatric conditions particularly the high percentage of abnormal records in aggressive psychopaths, and it is of value in assessing the effect of various drugs in the treatment of epilepsy. The main clinical value of E.E.G. examination at the present time is (1) in cases of suspected epilepsy, and (2) in the localisation of superficially placed cerebral tumours and abscesses. In both these groups of cases, however, there are very definite limitations to its usefulness, and normal E.E.G. records must not be taken to disprove the diagnosis of epilepsy or of cerebral tumour.

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I would like to thank Mrs. Leslie of the E.E.G. Department at Hill End for help with the records, and Mr. J. E. A. O'Connell for permission to reproduce some of them.

BIRTH

GLANVILL. On April 10th, 1949, at Maternity wing General Hospital, Sunderland, to Dr. Catherine Glanvill, wife of Dr. Terry Glanvill, a daughter.

DEATH

MORSE. On 21st April, at his home at Boscombe, Bournemouth, Charles George Hugh ("Toby") Morse, O.St.J., M.A., M.B., B.Ch., M.R.C.S., L.R.C.P., aged 65.

MEDICAL EDUCATION AT DUKE UNIVERSITY

By ERNEST and NINA PAGE.

MANY of you will remember us, the four Americans who studied pediatrics at "Bart.'s" during the summer of 1948; our white shoes and flashy ties and socks. We are pleased to be given the opportunity to make a comparison of Bart.'s with our school, the Duke University School of Medicine, and we believe that you will better understand our comments if we tell you about our educational system.

After three years in the "primary grades" and five in the "grammar grades" the average American student who contemplates the study of medicine enters "high school" where he remains for four years. During his high school career he completes four years of English; four years of a foreign language or two years each of two foreign languages, such as Latin, German, Spanish or French; four years of natural science, a general introductory course, biology, chemistry, and physics; two or three years of history and government; and three or four years of algebra, geometry, and trigonometry. In addition there may be elective courses in typewriting, music (choral or instrumental) and public speaking. Except for short-distance transportation, lunches, books and supplies the cost of his education, thus far, has been borne by the government. If he attends a consolidated rural or small-city school and lives two miles or farther from the school, he is transported to and from school at government expense.

After graduating from high school the student enters a college or university where he pays approximately £250 a year for tuition, room, and meals. There, during his first year, he tries to do everything possible: joins the glee club, the chapel choir, and a national fraternity which usually has a reputation for "being good," meets some women students, or "co-eds," and then thinks about his course of study. Because teaching usually consists of lecturing to from twenty to one hundred students at a time there is, in some colleges, little or no intimate conversation or discussion with the professors. In some small colleges, however, there usually are small groups in closer contact with the professors. Such colleges are more nearly like those in the Universities of Oxford and Cambridge. You will observe here a difference in manner of expression. We "go to school" throughout our student years, whereas you "read" and "attend the university."

The course of studies for the pre-medical student at Duke includes English composition and literature, zoology, inorganic and organic chemistry, physics, history, religion, mathematics, three years of French or German, and a large variety of other subjects varying with his individual interests. A student usually graduates from college aged twenty-one or twenty-two years and then enters upon what is reputed to be the longest, hardest, and most tiring struggle of them all, medicine.

During his welcoming talk on the first day of medicine school our professor of anatomy said to the group: "From this day forward medicine will be your mistress, and all other matters, wife and family, will be secondary." That attitude prevailed throughout the writers' training and the training of many others in different schools in this country. Many professors think that the number of facts to be learned by the student has increased greatly during the past two or three decades; that the technical procedures are more numerous; and that more reading must necessarily be done. So unrelenting is the pressure on a medical student that he feels always a sensation of fleeting time and work that must be completed. In this connection a recent move has been contemplated to increase the duration of medical training from four to five years.

At the Duke University of Medicine the first and second years are pre-clinical years and are divided into gross and microscopic anatomy, neuro-anatomy, bio-chemistry, physiology, bacteriology, pharmacology, pathology and physical diagnosis. The anatomy course of dissection is now being supplemented by excellent moving pictures in colour of a detailed dissection of an entire cadaver, and each anatomical region is shown four different times. There are numerous projection slides in colour for teaching and reviewing relationships of adjacent parts and for teaching histology. The primary aim, however, is to perform the dissection, to study at the dissecting table, and to learn histological material by looking at the actual tissue. At any hour of the day or night a student may

dissect, hold a muscle in hand while he reads from a book, or look with one eye into a microscope and with the other into a book. Four students as a group, one pair on each side of the body, work together in dissecting one cadaver for the four months devoted to nothing but gross anatomy, histology and neuroanatomy. A professor or an instructor is available throughout the daytime for questions and problems.

During the course of pathology, the student attends numerous autopsies, participating in four to six. Participation includes writing a summary of the clinical history, a description of the gross and microscopic appearance of all organs, and a diagnosis. In this course also, the museum is open for use throughout the night. The museum is very different from yours at Bart.'s; at Duke all the organs from each case are retained in covered pots of preservative from which they may be transferred, for the purpose of studying them, into pans where they may be seen and handled. As yet, Duke has nothing so famous as Pott's original specimen. Consequently, damage to historical specimens is not so much to be feared. At Duke, studying the anatomical change in each individual organ is a matter of secondary importance; of primary importance is seeing the reaction of the patient as a whole to the disease, and the spread of the disease throughout the patient's body by following the patient from a summary of the clinical course to an examination of the gross organs and the microscopic sections. All of the foregoing aids and a description of each case by a staff member are readily available to each medical student.

In other pre-clinical subjects, stress is placed upon learning by seeing and performing simple laboratory experiments on animals and the students. Each student is a subject for almost all routine clinical tests, such as a gastric analysis, blood chemistry determinations, urinalyses, and liver function tests. These tests, a small part of the biochemistry course, teach normal values, variations, theory, and a respect for the discomfort felt by the patient.

The two clinical years are devoted to junior and senior medicine and surgery for a total of six months each. Every student spends one half of each such six months period in the out-patient clinic. Three months are devoted to obstetrics and gynecology and three to pediatrics.

The function of the student is to constitute "an integral part of the team that treats the patient." He interviews and examines the patient before anyone else, and performs the necessary and routine urinalysis, hematological and fecal examinations. Then he writes a complete history of the present-and-past illnesses, makes a complete physical examination, and records the findings thereof and, if possible, arrives at a diagnosis. Frequently these records, with necessary corrections by the intern, constitute the only official record. All of this work must be ready by the morning following the arrival of the patient even when the latter arrives in the evening or early night. The history includes all the negative findings so that it can be used as a picture of the patient's past with which further developments may be compared at the time of the first admission and also during later visits. The student and intern insert "progress notes" from day to day in order to make the record more helpful to the next doctor who may attend the patient. In addition the teacher gives his diagnosis and the consultant his impression and the results of his examinations such as a urological instrumentation or neurosurgical procedures. About one half of the time is devoted to practical work as, for example, the care and treatment of patients, laboratory examinations, the administration of intravenous fluids and blood transfusions, and spinal punctures. The student is frequently told that the patient "belongs to him"; that he should take care of the patient and his needs; and that he should foresee and execute simple diagnostic tests and suggest other more complicated but necessary tests and X-rays to the house staff. The student is frequently asked what drug or treatment he would use, but he never has the authority to prescribe medicines on a ward nor in an out-patient clinic.

Since the clinical clerk works so much with the patient, it is considered conducive to good training if he performs his duties with the bearing of a doctor. For this reason he is always called "Doctor" by professors, nurses, and housemen. By attending with poise and thoughtfulness he tries to encourage the patient to address him and to think and speak of him as "my doctor." Occasionally this is strikingly illustrated when a patient refuses to take medicine or to carry out an order from a member of the house staff or a professor "because my doctor didn't tell me to do that."

In medicine, lectures on various subjects are usually given each day between 8.30 a.m. and 10.30 a.m. Ward rounds are held from 10.30 a.m. till 12.30 p.m. These rounds, made with house staff and professor, are concerned with the presentation of patients who entered the night before and the student's diagnosis and treatment of each case. The discussion usually includes the physiology and pathology of the disease and the rationale of the treatment. This discussion introduces everyone to the patient so that interest will be aroused and the clinical course will be easier to follow on subsequent rounds and in general discussion. In the afternoon laboratory work and a discussion of a disease or therapeutics by the assistant resident doctor takes up the earlier hours, and seeing the new patients the later hours. Evening hours are free for reading after the new patients are completed and all laboratory work is finished. Much of the teaching is accomplished by means of informal discussion of the patient and his problems of diagnosis and treatment between the student and resident staff throughout the day and evening. In medicine each student has a maximum load of three new admissions per week with an overall total of four to nine old and new patients.

In junior surgery the patient-load is five and nine. The student "work-up" is about the same as in medicine. Here, lectures deal with surgical subjects, and the rounds differ from medical rounds in that a patient is chosen to illustrate a disease. These rounds last only one hour, three days a week. On junior surgery the student "scrubs" and holds retractors on his patient whether the operation is a hemorrhoidectomy or pneumonectomy. Half of the three months' period is devoted to special surgical problems, such as orthopedics, urology, neurosurgery, ear, eye, nose and throat. In the senior year one week is devoted to anesthesiology, each student giving about ten anesthetics and observing others. A course in experimental surgery on dogs is given in which a group of four rotate as nurse, operator, anesthetist and assistant operator. Each student serves as operator or assistant operator on a laparotomy, thyroidectomy, caecectomy, cholecystectomy, intestinal anastomosis and gastrojejunostomy. The chief purpose of this training is to learn aseptic technique.

In obstetrics and gynecology everyone works in the out-patient and pre-natal clinics and rotates for deliveries and other in-patients. In-patients consist of post-natal patients, abortion cases, and a variety of gynecological problems. The student must sit with his antepartum patient from the time labour begins until after delivery. Since this section of the country is called the "eclamptic belt," partly because patients do not follow antepartum instructions, many toxemics are admitted and must be attended constantly by a student. The teaching is done by means of four lectures on obstetrics, two pre-operative conferences for gynecological patients, and two lectures on endocrinology per week. Here, too, the student must scrub on gynecological operations and on the ten to fifteen deliveries assigned to him, of which he performs five to ten himself. In contrast to Bart.'s there are no nurse midwives and no deliveries outside of the hospital. The student spends two weeks of this three months period on the psychiatric ward observing therapy, talking to patients, and attending conferences.

The out-patient clinics are similar for all services. After taking a complete history, examining the patient, and doing the laboratory work, the student presents the patient to the consultant, states his diagnosis, and proposes a treatment or necessary examinations to establish a diagnosis. The consultant may or may not follow the student's suggestions. The clinics are open each afternoon, except Saturday, from 1.00 p.m. to 5.00 p.m.

In pediatrics there is a similar schedule of teaching, a general clinic, and special return clinics for newborn children, problem children, and epileptics. The wards are open to students earlier and later in the day than at Bart.'s. The clerks take the histories directly from the parents, do a complete physical examination, and perform the laboratory work. For two weeks the student works in the psychiatric clinic taking histories, and for two more weeks works in the eye, ear, nose and throat clinic.

After medical school the student is required by Duke to serve as an intern (houseman) for at least two years before the official diploma and degree are given. In order to practice medicine he must then take an examination in the state in which he will practice, or take a National Board examination which is recognized in most states. These correspond to your "qualifying" examinations.

There follows now a discussion of a few of the more obvious differences between the

Duke University School of Medicine and Saint Bartholomew's Hospital.

At Duke there is a men's dormitory for medical students on the university grounds only three or four minutes walk from the medical school and hospital. This convenience is another reason for work at night and the late hours that students spend at the hospital. Even though the student be married or a young woman, who cannot live on the campus, the distances are not great and travel is quicker than in London, for Durham is populated by only 70,000 people. The accessibility of facilities and friendly association of the seventy-two members of each class lead to many social functions, such as picnics and parties for small groups and dances every three months for the whole shcool. But with all the foregoing conveniences Duke has neither a Journal nor an athletic team which represent the medical school.

At Duke the medical school and hospital are in the same long building surrounding numerous courts with the medical school at one end and the hospital at the other. The entire structure was erected twenty years ago by means of a grant of money from the endowment of the university by a tobacco millionaire. The buildings of the men's college, the chapel, the medical school, and the hospital are Gothic in style and are set in a forest of pine trees. Close by the hospital is a beautiful garden. Within the hospital are a post office and individual metal lockers for coats, instruments and books. The lunchroom facilities for the students are somewhat better at Bart.'s because of their proximity to the hospital, the relative inexpensiveness of the food, and shorter queues. At Duke the professors and interns eat in the same room in the hospital, whereas, the students must walk to the university dining halls and stand in lines of twenty to sixty persons. At Duke Medical School there is no " common room " where students may join in conversation. Consequently the dining halls, the " soda shop " and sometimes the laboratories hum with conversation when students meet there. On one side of the large reading room of the library are easy chairs for comfortable and leisurely reading. On the other side of the room are tables and cushioned chairs. The medical library at Duke contains more journals (approximately 450) than does Bart.'s, and is open from 8.30 a.m. until 10.30 p.m., seven days the week. Everyone has ready access to all journals and books, which are kept on open shelves, and may remove them from the library for one or two weeks. It is true that some books disappear, but it is believed that their accessibility for reading outweighs the loss.

Many people maintain that Americans depend too much on laboratory procedures for diagnostic purposes and not enough on clinical acumen. In part this is true. However, many physicians want some laboratory data to support their observations or history, and others think that, especially in a teaching hospital, any clinical observation which can be borne out by biological values is useful in teaching the underlying pathological processes and biochemical changes. Moreover, many doctors knowing that the requested studies will be abnormal still want them for the purpose of following the course of the disease and for prognostic purposes. Another reason for our laboratory investigations is the large amount of research carried on by teachers in both the preclinical and clinical departments which frequently calls for numerous tests. It is our impression that routine hemoglobin determinations, white cell counts, urinalyses, and Wasserman reactions are frowned upon in England, but it should be pointed out that diseases such as early diabetes, syphilis, anemia and occasionally leukemia are found by this method when their presence is not otherwise detectable. One other objective in which our laboratory work is an aid is the earlier diagnosis of disease and the consequent shortening of the course of the disease and the hospital stay.

The financial responsibility of the patient is quite different also. Since Duke has been in operation only two decades, there have been few benefactors leaving money to the institution. As a result the patient must pay for his treatment because the hospital is self-sustaining. The public in-patients must pay £2 per day for bed, food, medicines, X-rays and operating room fees. If the patient cannot afford the money, the county welfare or some other eleemosynary agency helps. So as to dispel any beliefs that you may hold that the hospital overcharges public ward in-patients, you may be assured that a large part of fees from private patients of the professors and a percentage of their room fees go towards maintaining the public wards. It is easy to understand, therefore, why there must be so much haste in diagnosing and

treating patients. Private patients occupy about one-half of the beds in this 600-bed hospital. Their accommodations are more pleasant and they may choose their physician, but the services rendered are about the same as services received by public ward patients. Recently students on medicine have been working on private wards, and the trial has met with apparent success. The physicians who staff the private wards and private out-patient clinic as well as the physicians in research take turns rounding with the medical students on the public wards.

In general the objectives at Duke are to learn a rapid routine examination which covers many diagnostic possibilities thus leaving as much time as possible for reading, thinking, and observing; to learn by seeing and doing everything to each patient so that the correlation of the disease with the history, the physical findings and the laboratory findings will be remembered longer; to learn the application of basic knowledge in the selection of proper lines of investigation and in the care and treatment of the patient.

It is true that you have centuries of experience and tradition behind your methods of teaching, while we have a fresh approach of only twenty years. However, the quality of a doctor and his worth to society depend not so much upon his teachers or their methods of teaching, whether by working on after fatigue creeps in or by stopping for a pot of tea and conversation, as upon the man behind the title, his integrity, industry and initiative.

We would like to thank all of you for answering our questions and acquainting us with the routine at Bart.'s and English life in general. We would like your criticism of our system of education and will not be hurt because we know your reputation for making comments and asking questions be it in Parliament or Hyde Park. We would like also to thank our two deans who made our trip possible and gave us the opportunity better to understand England and to appreciate our common heritage.

CORRESPONDENCE

CAMPAIGNING IN CONDITIONS OF GREAT HEAT

To the Editor, St. Bartholomew's Hospital Journal.

Dear Sir,

It is, of course, admitted that England's climate is a national disgrace and the right of the inhabitants to grumble about it is usually allowed to pass unchallenged. Dr. Cruden's account of Heat Stroke in the Garden of Eden, though particularly interesting, is perhaps unfortunate in that it definitely establishes that there are worse places than the Home Counties, and, for myself, having served in Egypt in two wars I agree with him. A tent temperature of 135° I regard as truly appalling, remembering as I do a daily temperature of 120° during the period of afternoon rest (2.0 p.m. —4 p.m.) at a time when we were part of the garrison of the Suez Canal in the summer of 1915. Later we found that there were even worse conditions in the Aden hinterland, and it seemed impossible that either we or the horses of "B" Battery H.A.C., in which I was then serving, could ever get used to such heat. But we did, and it is in the matter of acclimatisation that I would venture to endeavour to supplement Dr. Cruden's careful study of the prevention and treatment of Heat Stroke.

Before giving one or two examples of this it is perhaps interesting to note that whereas in 1915 and onwards everyone wore sun helmets in the Near East, and later there were added protective strips sewn into tunics to cover the spine, yet in 1940 when we reached Egypt people smiled at our sun helmets, and after a fortnight I never again wore one either in Egypt, or Somaliland, Kenya or Tanganyika, nor did I see any troops wearing them. I did, however, notice that some of the European civilians of Kenya were very careful never to omit wearing their sun helmets during the middle day heat. Perhaps they had been previously victims of sun stroke. I don't know how to explain these changed habits of British troops in respect of exposure to the sun but it is a fact that in the territories referred to no harm resulted though it must be admitted that the climate was less severe than that of Mesopotamia.

That the control of body heat is obviously a matter of great military importance may be instanced by what happened when our troops occupied Diego Suarez, the harbour at the top of Madagascar. The task force was brought by sea from this country and following the practice of those times sun bathing was forbidden during the voyage. Soon after the successful landing some of the troops had to dig themselves in for a short period. To do so they, of course, took off their shirts, for the heat was extreme, and as a result many got seriously blistered. The commander who can put his troops into action prepared to meet unusual local conditions obviously gains an important asset. Cautious and progressive exposure to the sun is one way of training troops to fight in the tropics; to teach them to do without water is another, for troops who must fight in tropical deserts cannot be supplied with enough water to follow the routine so well organized for mechanics in base workshops at, say, Basra, or even for those whose task is to toil in New York

hospitals during a heat wave. But the ability to march and fight in great heat with an etxremely limited fluid intake is one which can be acquired and this is well illustrated by the experiences of "B" Battery, H.A.C., during the assaults in 1917 from the deserts of southern Palestine upon the Turks at Gaza. I was not serving with them at that time but several instances are given in the History of the Honourable Company in the Great War, which speaks, for example, of "reconnaissances lasting thirty-six hours" for which the men started with full water bottles and got one refill from the regimental water-carts. The palm of honour, however, must be shared by the officers and men with the horses of the battery which had for this work been trained to water not thrice but only once in twenty-four hours. As a result of this the following unequalled record was achieved :—"Since leaving Beersheba, nine days previously, we had marched about one hundred miles and fought two general actions and the horses had only watered three times. In this period we lost only eight horses from exhaustion." The intervals between waterings were 68, 72 and 76 hours. Though this episode did not occur during the height of summer but in September, the temperature by day was above 100°, the night being cool. Such things are only possible in a unit trained to perfection and conscious of the value of a firm discipline which forbade that any water should be drunk from the water bottles (and there was no other source) until the O.C. gave permission for this. Just how such endurance is physiologically possible it is hard to understand but it seems that as a result of a specially organised acclimatisation the normal method of keeping cool by sweating is partly held in abeyance and the animal, man or beast, thereby manages to conserve the precious water for other vital processes.

Dr. Cruden's admirable descriptions of Heat Exhaustion and Acute Heat Stroke show how extremely serious are these conditions and I feel sure that he will agree that their incidence can be lessened if officers are taught how to care for their men.

Yours faithfully,

R. OGIER WARD.

149 *Harley Street,*
*London, W.*1.

21*st April,* 1949.

THE NATIONAL HEALTH SERVICE

To the Editor, St. Bartholomews Hospital Journal.

Dear Sir,

Your correspondent, Mr. J. D. B. Andrews, in criticising your February Editorial picked some unhappy examples of the achievements of the National Health Service for he was, of course, merely reiterating certain statistics which Government speakers cited in a recent debate in the House of Commons.

The true value of a health service is not to be measured by the number of dentures and spectacles supplied but by the overall *quality* of service available at a reasonable and economic rate of expenditure. Furthermore, where contributions to such a service are *compulsory* it is hardly justifiable to estimate its popularity by the number of people seeking its "benefits." It is, I suppose, inevitable but somewhat pathetic, that the politicians and your correspondent are enamoured with certain quantitative aspects of the service. The majority of your readers and educated members of the general public will consider the numbers of dentures, spectacles and hearing-aids supplied as poor vindication of the colossal upheaval and expense engendered by the new scheme.

It is surely ludicrous to suggest that the true value of the service is demonstrated by the fact that 95% of the population have "signed on." I too, with my family, have signed on, not because of any love for the scheme but because I see no reason why my general practitioner (who, like many of his kind, is suffering great financial hardship) should miss four extra capitation fees. After being compelled to subscribe to a scheme of this kind the public would surely be foolish if they did not register for its benefits.

Your correspondent is quite wrong in suggesting that those not taking advantage of the medical service would only be out of pocket tenpence per week. Does he not realise that this contribution covers less than a fifth of the present costs of the scheme and that the rest is provided by the exchequer out of direct and indirect taxation. Those not using the scheme stand to lose far more than tenpence per week and it should be remembered that they have to pay the cost of all drugs and appliances as well as their doctors' fees. The "popularity" of the scheme is, therefore, seen to be comparable to the alleged popularity of certain leaders and political parties in the rigged elections of a dictatorship.

I enjoin Mr. Andrews to reflect upon the underlying philosophy of the National Health Service Act. From the point of view of the public its greatest faults are, firstly, that they have absolutely no conception of the wholly exorbitant cost of the service and, secondly, that it encourages the irresponsible element (present in all too many of us) to seek their *rights* while failing to bring home to them their *responsibilities*. From the point of view of the profession it interferes to a wholly unwarrantable degree with our independence and makes us largely subservient to political control and theory of one sort or another.

If the public, the profession and the minister were all angels the plan might work quite well; and, if we really were all angels there would be no need for the plan. It is unfortunately true that plans of this kind all too often produce results which are the very reverse of those intended.

In its grandiose, materialistic and political conception of what constitutes a Health Service, as also in the manner by which it has been implemented, the National Health Service Act (notwithstanding those millions of intra-oral and ocular accessories mentioned by your correspondent!) does, as you say Sir, constitute one of the greater follies of History.

There would be no justification in my claiming more of your space to describe the many evil effects of the Act. Your correspondent has only to read the medical journals and newspapers, to talk to the average practitioner or to study the present difficulties of entry into general practice

to understand some of these things. I will venture to prophesy that when Mr. Andrews graduates from his armchair in the Abernethian room to the realities of medical practice there is a very strong chance that he will be in agreement with you.

I remain Sir,

Yours faithfully

REGINALD S. MURLEY.
M.S., F.R.C.S.

43, *Newlands Avenue,*
Radlett, Herts.

April 24th, 1949.

(*This correspondence must now cease.*—EDITOR.)

THE S.C.U.

To the Editor, St. Bartholomew's Hospital Journal.

Dear Sir,

With the steady growth of the medical curriculum and the never-ceasing demands of the more immediately practical aspects of his craft, the medical student—perhaps to a greater extent than any other type of student—finds it difficult to retain a grasp of life in its wholeness. Large tracts of human experience pass him by, imperfectly assimilated. He tends to become remote from the questions raised by religion and philosophy, and has little time to ponder over their significance to the personal and social problems of our age.

But if we cannot undertake an exhaustive study of these problems, short, regular attempts to think them out and discuss them will do much to halt the onset of that condition so fatal in a doctor—the exclusively technical mentality.

The Student Christian Movement seeks, *inter alia,* to provide opportunities for such study and discussion. The recently-formed Branch at Bart.'s wishes to give notice of its existence to all students, Christian or otherwise, who are interested in such problems and are willing to do some hard thinking to gain an understanding of them.

Yours faithfully,

H. M. COLLYMORE.
President.

The Abernethian Room,
St. Bartholomew's Hospital.

May 2nd, 1949.

SPORT

RUGGER CLUB

April 16th, v. Bedford

RESULT: LOST BY 20 POINTS TO 0.

It is a sad day when so many Bart.'s rugger players are "otherwise engaged" that three people from outside the hospital had to be called in to complete the team: such was the case against Bedford. However, the loyal dozen, and the extra three, battled well against one of the best sides in the country.

Played in tropical heat and on very hard ground, the game was surprisingly fast and entertaining. One of the lightest packs ever to take the field for Bart.'s did very well indeed, but their superior weight forward and the not inconsiderable skill of Haynes at stand-off half just told in Bedford's favour.

J. B. Holland played a brilliant game at scrum half, and we are very grateful to him for turning out for us. Mathews and Baker tackled like demons and Struther was, as always, a tower of strength.

April 23rd, Middlesex Sevens

In the second round, the Bart.'s Seven, playing very shakily, scraped home against Queen Mary College, but the third round match against Middlesex Hospital was of sterner stuff. It was acclaimed as the best match of the day on the St. Mary's Hospital ground at Teddington and the highlight was the John-Dick "scissors" which all but produced a try and certainly brought the crowd to their feet.

So Bart.'s ended the season with colours flying, going down to their friendly rivals who managed to reach the seventh round.

CRICKET CLUB

April 7th, v. St. Thomas's Hospital

RESULT: BART.'S 151—7 (dec.).
ST. THOMAS'S HOSPITAL 89.

A victory by 62 runs in the first match provided a good send-off to the season.

Winning the toss, the Bart.'s skipper elected to bat on an easy-paced wicket. Vazifdar and Hawkes gave the side a good start with an opening partnership of 45. Vazifdar, in particular, batting very nicely, looked set for a big score when he was caught for 34.

Tomlinson then enlivened proceedings with a typical hard-hit 58.

The match seemed to be heading towards a draw when Haigh (4—24) and Cardwell (3—21) took command. They both bowled very well and the game was finished with ten minutes to spare.

P. D. M.

ATHLETIC CLUB

The 1949 Athletic Season has opened well with Bart.'s winning a closly fought match against Shaftesbury Harriers; Arthur Wint's glorious running in the final relay just assuring a result in our favour. The results show, however, our need for men to perform in the field events to aid Alf John who spent a busy evening putting the shot, throwing the discus and javelin and long jumping.

RESULTS:—

Bart.'s, 56 pts. Shaftesbury Harriers, 49 pts.

100 yds.—1st, Rosser; 3rd, Fildes.
Winning performance—Time, 11.2 secs.

220 yds.—2nd, Lascelles; 3rd, Fildes.
Winning performance—Time, 24.2 secs.

440 yds.—1st, Wint; 2nd, Carter.
Winning performance—Time, 54.2 secs.

880 yds.—1st, Dormer; 2nd, MacDonald.
Winning performance—Time, 2 min. 2.6 secs.

1 mile—1st, Burn; 2nd, Menon.
Winning performance—Time, 4 min. 38.8 secs.

Long Jump—1st, John.
Winning performance—Distance, 19ft. 11 ins.

High Jump—3rd, Rosser; 4th, Taylor.
Winning performance—Height, 5 ft. 6 ins.

Weight—3rd, John; 4th, Wint.
Winning performance—Distance, 38 ft. 6½ ins.
Discus—3rd, John; 4th, Lascelles.
Winning performance—Distance 105ft. 10½ins.
Javelin—1st, John.
Winning performance—Distance, 144ft. 5 ins.
Relay (4 x 220 yds.)—1st, Bart.'s.

Congratulations to Arthur Wint who has been elected Captain of London University Athletic Club.

Two future dates to remember are:—
Saturday, June 11—United Hospitals' Championships at Chelsea.
Saturday, July 2—66th Annual Sports Day at Chislehurst.

A SHORT ESSAY ON RUGBY SUPPORTERS

By PHYLLIS TYNE

No reference is intended to persons dead or dying. Anyone believing himself to be portrayed should be unutterably ashamed.

THE passing of yet another Rugby season brings melancholy to the hearts of the devotees, but much remains, for as discretion is the better part of valour, so discussion is the better part of football.

The deeds of the mighty have been chronicled by a mighty pen, but what of those whose names do not appear in letters of fire—the supporters who add so much to hospital football. The part they play is a humble one, so I shall write their epitaph, for in humility my pen owns no equal. But though the part they play is humble, immortality shall fit them well, for on Elysian plains where perfect rugby is played by perfect teams (but not, we hope, with perfect spheres) their support will still be needed.

In this short study of the genus "Supporter," let us adopt the methods of the Oxford School, and start with a short historical resumé. Here, unfortunately, we have no lantern slides to afford us a little innocent amusement, so that whilst retaining the method, we must forego the technique. However—to our essay.

In the autumn of 1946 a body of public spirited gentlemen opened a subscription list, so that a number of instruments could be purchased. The money poured into the coffers until at the end of the first week two shillings and sixpence had been received. At this stage, flattery and cajolery were abandoned and brute force accounted for the total soon reaching the one pound mark.

The word instruments and the underlying policy of this move may now be profitably defined. Firstly, the policy was to provide a somewhat bedraggled Rugby team with musical accompaniment, so that the resultant noise would either encourage deeds of heroic splendour, or cause the opposing team to give a tasteful imitation of the Walls of Jericho. Neither of these results has been achieved as yet, but the health giving results accruing to the gentlemen actually operating the devices have proved so beneficial that a cup match is not now complete without one hunting horn, one fog horn, one drinking horn and a horn handled penknife, to say nothing of one ship's siren — the late property of H.M.S. "Gamage."

But, alas, the Cup has gone elsewhere and our machines are hibernating for yet another summer, for we fear too much the ghost of Dr. Grace to parade our wares at cricket matches, and it is too, too exhausting keeping up with the boats in a rowing regatta—blowing a four foot coach horn withal.

We take courage for next season, however, for should Mr. Seymour Cocks' Bill become law, we are expecting a different class of horn blowers to join our ranks, a class whose pink coats should add still another touch of colour to our already colourful cup matches.

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DISEASES OF THE STUDIOUS

Some time ago, a kindly relative lent me some books which he considered would be useful to me in my studies. Amongst them was a copy of "BUCHAN'S DOMESTIC MEDICINE." Not unnaturally, it was to this volume that my attention was first directed, and, on discovering that it was published in 1803, *I must confess that more than a few hours were spent amongst its faded pages. The writer covers a wide range of diseases—few of which he found incurable —and treats each one in a matter-of-fact, straightforward way that compares most favourably with some of the times of this more "enlightened" age. His views on:* "Cold Bathing, with Remarks on the Cafes. in which the Warm Bath is more advifable," *are remarkable: his ideas with regard to* Intemperance and Corfets, *illuminating; but the chapter that interested me most, and the one that I considered so applicable to our section of the community, was that dealing with the Studious. I have no idea what effect it may have on the majority of the readers, but I was so thoroughly alarmed by some of the melancholy prognostications that, in lieu of the twelve-mile horse ride suggested, I went straight out and trundled my ancient push-bike around ten miles of Suffolk countryside: it did me the world of good.*

N.B.—I have modernised the text slightly by changing f's to s's as they are inclined to hamper one's reading and may lead to undesirable confusion here and there.

D.C.

Intense thinking is so destructive to health, that few instances can be produced of studious persons who are strong and healthy. Hard study always implies a sedentary life; and when intense thinking is joined to the want of exercise, the consequences must be bad. We have frequently known even a few months of close application to study ruin an excellent constitution, by inducing a train of nervous complaints which could never be removed. Man is evidently not formed for continual thought more than for perpetual action, and would be as soon worn out by the one as by the other.

So great is the power of the mind over the body, that, by it's influence, the whole vital motions may be accelerated or retarded, to almost any degree. Thus cheerfulness and mirth quicken the circulation, and promote all the secretions; whereas sadness and profound thought never fail to retard them. Hence it would appear, that even a degree of thoughtlessness is necessary to health. Indeed the perpetual thinker seldom enjoys either health or spirits; while the person who can hardly be said to think at all, generally enjoys both.

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the greatest blessings may be abused. Thinking, like everything else, when carried to extreme, becomes a vice; nor can anything afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions, or the like.

Instead of attempting to investigate the nature of that connection which subsists between the mind and the body, or to inquire into the manner in which they mutually affect each other, we shall only mention those diseases to which the learned are more peculiarly liable, and endeavour to point out the means of avoiding them.

Studious persons are very subject to the gout. This painful disease in a great measure proceeds from indigestion, and an obstructed perspiration. It is impossible that the man who sits from morning till night should either digest his food, or have any of the secretions in due quantity. But when that matter which should be thrown off by the skin, is retained in the body, and the humours are not duly prepared, diseases must ensue.

The studious are likewise very liable to the stone and gravel. Exercise greatly promotes both the secretion and discharge of urine; consequently a sedentary life must have the contrary effect. Any one may be satisfied of this by observing, that he passes much more urine by day than in the night, and also when he walks or rides, than when he sits. The discharge of urine not only prevents the gravel and stone, but many other diseases.

The circulation in the liver being slow, obstructions in that organ can hardly fail to be the consequence of inactivity. Hence

sedentary people are frequently afflicted with schirrous livers. But the proper secretion and discharge of the bile is so necessary a part of the animal economy, that where these are not duly performed, the health must soon be impaired. Jaundice, indigestion, loss of appetite, and a wasting of the whole body, seldom fail to be the consequences of a vitiated state of the liver or obstructions of the bile.

Few diseases prove more fatal to the studious than consumptions of the lungs. It has already been observed, that this organ cannot be duly expanded in those who do not take proper exercise; and where that is the case, obstructions and adhesions will ensue. Not only want of exercise, but the posture in which studious persons generally sit, is very hurtful to the lungs. Those who read or write much are ready to contract a habit of bending forwards, and often press with their breast upon a table or bench. This posture cannot fail to hurt the lungs.

The functions of the heart may likewise by this means be injured. I remember to have seen a man opened, whose pericardium adhered to the breast-bone in such a manner as to obstruct the motion of the heart, and occasion his death. The only probable cause that could be assigned for this singular symptom was, that the man, whose business was writing, used constantly to sit in a bending posture, with his breast pressing upon the edge of a plain table.

No person can enjoy health who does not properly digest his food. But intense thinking and inactivity never fail to weaken the powers of digestion. Hence the humours become crude and vitiated, the solids weak and relaxed, and the whole constitution goes to ruin.

Long and intense thinking often occasions grievous headaches, which bring on vertigoes, apoplexies, palsies, and other fatal disorders. The best way to prevent these is, never to study too long at one time, and to keep the body regular, either by proper food, or taking frequently a little of some opening medicine.

Those who read or write much are often afflicted with sore eyes. Studying by candle-light is peculiarly hurtful to the sight. This ought to be practised as seldom as possible. When it is unavoidable, the eyes should be shaded, and the head should not be held too low. When the eyes are weak or painful, they should be bathed every night and morning in cold water, to which a little brandy may be added.

It has already been observed, that the excretions are very defective in the studious. The dropsy is often occasioned by the retention of those humours which ought to be carried off in this way. Any person may observe, that sitting makes his legs swell, and that this goes off by exercise; which clearly points out the method of prevention.

Fevers, especially of the nervous kind, are often the effect of study. Nothing affects the nerves so much as intense thought. It in a manner unhinges the whole human frame, and not only hurts the vital motions, but disorders the mind itself. Hence a delirium, melancholy, and even madness, are often the effect of close application to study. In fine, there is no disease which can proceed either from a bad state of the humours, a defect of the usual secretions, or a debility of the nervous system, which may not be induced by intense thinking.

But the most afflicting of all the diseases which attack the studious is the hypochondriac. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies than a single one. To what a wretched condition are the best of men often reduced by it! Their strength and appetite fail; a perpetual gloom hangs over their minds; they live in the constant dread of death, and are continually in search of relief from medicine, where, alas! it is not to be found. Those who labour under this disorder, though they are often made the subject of ridicule, justly claim our sympathy and compassion.

Hardly anything can be more preposterous than for a person to make study his sole business. A mere student is seldom a useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed, it rarely happens that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often lose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute sceptics and overwhelm them with doubts and uncertainty. All that is necessary for man to know, in order to be happy, is easily obtained; and the rest, like the forbidden fruit, serves only to increase his misery.

Studious persons, in order to relieve their minds, must not only discontinue to read and write, but engage in some employment or

diversion that will so far occupy the thought as to make them forget the business of the closet. A solitary ride or walk are so far from relaxing the mind that they rather encourage thought. Nothing can divert the mind when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind and consequently relieve it.

Learned men often contract a contempt for what they call trifling company. They are ashamed to be seen with any but philosophers. This, however, is no proof of their being philosophers themselves. No man deserves that name who is ashamed to unbend his mind by associating with the cheerful and gay. Even the society of children will relieve the mind and expel the gloom which application to study is too apt to occasion.

As studious persons are necessarily much within doors, they should make choice of a large and well-aired place for study. This would not only prevent the bad effects which attend confined air, but would cheer the spirits and have a most happy influence on both the body and mind. It is said of Euripides, the tragedian, that he used to retire to a dark cave to compose his tragedies; and of Demosthenes, the Grecian orator, that he chose a place for study where nothing could be either heard or seen. With all deference to such venerable names, we cannot help condemning their taste. A man may surely think to as good purpose in an elegant apartment as in a cave; and may have as happy conceptions where the all-cheering rays of the sun render the air wholesome, as in places where they never enter.

Those who read or write much should be very attentive to their posture. They ought to sit and stand by turns, always keeping as nearly in an erect posture as possible. Those who dictate may do it walking. It has an excellent effect frequently to read or speak aloud. This not only exercises the lungs, but almost the whole body. Hence studious people are greatly benefited by delivering discourses in public. Public speakers, indeed, sometimes hurt themselves by overacting their part; but this is their own fault. The martyr to mere vociferation merits not our sympathy.

The morning has, by all medical writers, been reckoned the best time for study. It is so. But it is also the most proper season for exercise, while the stomach is empty and the spirits refreshed with sleep. Studious people should, therefore, sometimes spend the morning in walking, riding, or some manly diversions without doors. This would make them return to study with greater alacrity, and would be of more service than twice the time after their spirits are worn out with fatigue. It is not sufficient to take diversion only when we can think no longer. Every studious person should make it a part of his business and should let nothing interrupt his hours of recreation more than those of study.

Music has a very happy effect in relieving the mind when fatigued with study. It would be well if every studious person were so far acquainted with that science as to amuse himself after severe thought by playing such airs as have a tendency to raise the spirits and inspire cheerfulness and good humour.

It is a reproach to learning that any of her votaries, to relieve the mind after study, should betake themselves to the use of strong liquors. This, indeed, is a remedy; but it is a desperate one and always proves destructive. Would such persons, when their spirits are low, get on horseback and ride ten or a dozen miles they would find it a more effectual remedy than any cordial medicine in the apothecary's shop, or all the strong liquors in the world.

The following is my plan, and I cannot recommend a better to others. When my mind is fatigued with studies or other serious business, I mount my horse and ride ten or twelve miles into the country, where I spend a day, and sometimes two, with a cheerful friend; after which I never fail to return to town with new vigour and to pursue my studies or business with fresh alacrity.

It is much to be regretted that learned men pay so little regard to these things! There is not anything more common than to see a miserable object overrun with nervous diseases bathing, walking, riding, and, in a word, doing everything for health after it is gone; yet, if anyone had recommended these things to him by way of prevention the advice would, in all probability, have been treated with contempt, or, at least, with neglect. Such is the weakness and folly of mankind, and such the want of foresight, even in those who ought to be wiser than others!

With regard to the diet of the studious, we see no reason why they should abstain from any kind of food that is wholesome, provided they use it in moderation. They ought, however, to be sparing in the use of everything that is windy, rancid, or hard of diges-

tion. Their suppers should always be light or taken soon in the evening. Their drink may be water, fine malt liquor, not too strong, good cider, wine and water, or, if troubled with acidities, water mixed with a little brandy, rum, or other genuine spirit.

We shall only observe, with regard to those kinds of exercise which are most proper for the studious, that they should not be too violent, nor ever carried to the degree of excessive fatigue. They ought likewise to be frequently varied so as to give action to all the different parts of the body, and should, as often as possible, be taken in the open air. In general, riding on horseback, walking, working in a garden, or playing at some active diversions are the best.

We would likewise recommend the use of the cold bath to the studious. It will, in some measure, supply the place of exercise, and should not be neglected by persons of a relaxed habit, especially in the warm season.

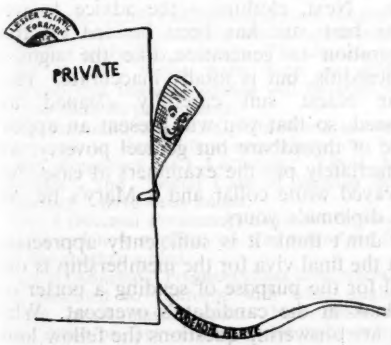
No person ought either to take violent exercise or to study immediately after a full meal.

In the above remarks on the usual diseases of the studious my chief object was to warn them of the evil consequences of *painful* and *intense thinking*. But I should be sorry to damp the ardour of their literary pursuits, which are injurious to health only when continued with incessant toil at late hours and without due intervals of rest, refreshment, relaxation and exercise. It is not thought, says the medical poet, 'tis painful thinking that corrodes our clay. I deemed it necessary to be more explicit on this head, in consequence of having found that my former cautions to men of genius and science had been understood in too rigorous a sense as discouraging the manly exertion of real talents.

AIDS TO ANATOMY

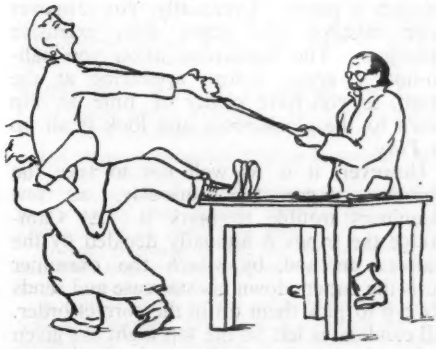
or Legends of the Cave men

PUDENDAL NERVE



Alas of this we cannot write,
In truth we are ashamed
To tell you how Pudendal Nerve
Came thus to be so named.

DIGITAL FOSSA



T'was in a viva-voce—
"What goes in here you lout?"
The poor wretch stuck his finger in
But couldn't get it out.

J.S.B.

THE JOURNAL

Contributions must reach the Editor before the first Tuesday of the month for inclusion in the following number.

HOW TO PASS EXAMINATIONS

By ALAN TOIS

I DON'T suppose a man can read medicine longer than eighteen months before losing the naïve idea that passing examinations has anything to do with skill, knowledge, or ability. Exams can only be overcome by a mixture of showmanship, quick-wittedness, and downright low cunning: thus they remain perfectly fair tests of the qualities demanded of the successful doctor.

Let us consider the road to success in detail:

The Written Paper

An infallible method of passing the written part of the contest is known to old hands as *The Two-room System*. Now, examinations these days are usually conducted in two or more rooms, labelled 1-250, 251-500, or some such figure. Suppose your number is 301. You wander with the crowd into the 1-250 room and parade anxiously up and down the aisles. The questions will be set out on the candidates' desks and no effort is required to familiarize yourself with the whole paper. When everyone is settling down and beginning to write, you present yourself with considerable agitation, to the invigilator, telling him you haven't been allotted a place. Eventually, you discover your mistake, and retire with extensive apologies. The regulations allow you half-an-hour's grace before appearing at the exam, so you have plenty of time to nip down to the cloak-room and look it all up in *Tidy*.

However, it is as well not to take the question paper too seriously, as few examiners trouble to mark it. At Cambridge the tripos is annually decided by the staircase method, by which the examiner hurls the papers down his staircase and sends his gyp to pick them up in the correct order. All candidates left on the top flight are given firsts, the landing collects a number of seconds, thirds are distributed to the mass on the lower flight and anyone on the ground floor fails. Then there is the habit by which examiners pass the tedious hours, betting the candidate five marks or so he won't make such and such a mistake on the following page—it's a fair do, the pundit often loses.

The Path Viva

Incomprehensible slides are easily dealt with — simply rack down the microscope until you crack the cover-slip. They will then have to bring you a new slide and a new microscope. If you are still foxed, repeat the manoeuvre. Eventually they will run out of slides, microscopes, or patience, or all three simultaneously.

As for the bottles, in the Cambridge M.B., at any rate, they leave you alone with three specimens withdrawn from a central pool before coming back to question you on them. A friend of mine, finding himself floored by one of the three jars, took a gastric ulcer from the main collection and slipped the mystery into the convenient sleeve of his M.A. gown. Later, remembering advice from other candidates, he hurled the evidence in the dead of night over Garret Hostel Bridge. The tinkle of glass upon glass reached his ears—everyone had the same idea, and the pathological museum at Cambridge is slowly silting up the River Cam.

The Viva and Clinical

This is the most difficult part of the whole exam. Firstly, the mode of arrival is highly important. It is as fatal to arrive for the Conjoint in a taxi as it is essential to present yourself at the College of Physicians with one. Next, clothing — the advice to wear your best suit has been handed on from generation to generation, like the signs of pericarditis, but is totally inaccurate. Have your oldest suit carefully cleaned and pressed, so that you will present an appearance of threadbare but genteel poverty, and immediately put the examiners at ease. Add a frayed white collar and a Mary's tie, and the diploma's yours.

I don't think it is sufficiently appreciated that the final viva for the membership is only held for the purpose of sending a porter out to look at the candidate's overcoat. While you are answering questions the fellow looks through the door and makes a secret sign to decide your fate. Dark form-fitting overcoats are passed, and a black homberg with a rolled umbrella puts you on the list of prospective Fellows.

In the clinical, the golden rule is *The Customer is Always Right*. Ask the patient —he knows. A friend of mine applied this advice recently, but was highly annoyed to find the patient — a respectable-looking elderly gent—had no idea why he was being

detained in hospital. Physical examination proved entirely negative. The bell was about to ring, and little beads of sweat stood out on my friend's brow. "I like doctors," said the patient, chattily, "particularly young doctors like you." "Thank you very much," replied my friend, without much enthusiasm. "Yes," went on the old boy, "I've taken a fancy to you. I'd like you to come and stay with me for the week-end." "Charmed, I'm sure," grunted the candidate between his teeth, desperately fiddling about with an opthalmoscope. "I haven't much of a place," continued the patient, "just a few thousand acres out Maidenhead way. Bit of rough shooting if you want it, and I've fishing rights on the Thames. Tell you what I'll do. I'll send one of my chauffeurs down with a Rolls—the gold-plated one. Of course," he added confidentially, "I'm one of the governors of the Bank of England." By that time my friend had flown at his pupils with a torch. Even so, in the subsequent entirely satisfactory interview, while he was desperately making up physical signs, he was haunted by the disquieting notion that the fellow really was one of the governors of the Bank of England.

Well, there you are—the above directions have carried me successfully from School Certificate to qualification. The only occasion, I regret to say, on which they miscarried was the Membership. But, as everyone knows, that exam is blasted unfair.

B.W.I. RE-UNION DINNER

A reunion dinner of old Bart.'s men was held in the Hotel Normandie, Trinidad, B.W.I., on December 3rd, 1948, in honour of Mr. Rodney Maingot who was visiting the Island. Others present were:—Stanley E. Littlepage, R. C. Dolly, M. V. Boucand, K. Bhagan, E. De Verteuil, V. M. Metivier, Miss Winifred Grace Holding (now Matron-in-chief, Northern Rhodesia), T. E. A. Boucand, L. A. H. McShine, T. R. McDougall, D. McShine. C. Knowles and T. Henry Pierre.

It is hoped that in future the dinner will be held annually.

BOOK REVIEWS

EDEN & HOLLAND'S MANUAL OF OBSTETRICS, by Alan Brews. 9th Edition. Pp. 796 + xii. J. & A. Churchill, Ltd. 1948. Price 42s.

Before the eighth edition of this book became out of date, it was the standard text of all those who took their midwifery seriously. The changes introduced by Dr. Brews have been so skilfully tempered that this new edition will be even more popular than its predecessor.

The presentation is in IX parts bound in a single cover and to this edition appendices on "Diet during Pregnancy and Lactation," "Post Natal Exercises" and "Social Care of Women during Pregnancy," have been added.

Part I (Normal Pregnancy) has been thoroughly revised and new material on the ovum, the fœtus and the mother added.

Part II (Abnormal Pregnancy) has been rearranged and modified to conform with what might be termed chronological order. New matter has been added on Graves disease and embryonic and fœtal abnormalities.

Parts III and IV (Normal and Abnormal Labour) remain little altered since the basic principles of obstetrics do not change, but a review of analgesia has been included and relatively minor alterations made.

Part V (The Puerperium) has been almost entirely re-written and now conforms with the current practice in chemotherapy and physiotherapy.

Part VI (The Fœtus) includes a review of Barcroft's work and its application.

Part VII (The Newly Born Child) now includes new work on haemolytic diseases and chemotherapy applied neonatally.

Part VIII (Obstetrical Operations). Apart from the prominence now given to lower segment Caesarian section this remains essentially the same.

Part IX (Maternal Mortality and Morbidity. The Maternity Service). Sir Eardley Holland has revised this part, further comment is unnecessary.

Undoubtedly this is the best book of its type extant at the present day.

NOTES ON INFANT FEEDING, by G. B. Fleming and S. Graham. 3rd Edition, pp. 66. E. & S. Livingstone. 1948. Price 3s.

The chapters on infant feeding in standard texts are usually rather dull.

Professors Fleming and Graham have succeeded in presenting their subject briefly, concisely and above all in an interesting style.

Correct emphasis is laid on the preference for breast feeding and one third of the book is devoted to its various aspects.

A further third covers artificial feeding in an adequate fashion; the book is rounded off with sections on "The Feeding of Premature Infants," "Failure to Thrive" and "Diarrhoea and Vomiting."

Appendices of useful data are included. In all an excellent book which deserves better than the flimsy cover which houses it.

PROBLEMS OF FERTILITY IN GENERAL PRACTICE, by M. H. Jackson, J. Malleson, J. Stallworthy and K. Walker. Hamish Hamilton, 1948, pp. 255. Price 17s. 6d.

This book really deals with two problems; the first part covers the investigation and treatment of the infertile marriage and the second part is a

careful survey of the various methods of clinical contraception. Neither of these subjects is particularly well provided for in the average gynaecological textbook, and the subject is of great importance, both to the general practitioner and the specialist. There is no doubt that much maladjustment exists in many marriages and that this is responsible for many functional and some organic disorders in both partners.

The style of this book is crisp and forthright, and the subject matter accurate and reliable. Treatment is up-to-date. The chapters by John Stallworthy are particularly good. He has had the courage to jettison some of the time-honoured rubbish which has been copied from textbook to textbook. His conservative and sensible treatment of the retroverted and gravid uterus is refreshing. Every practising doctor sooner or later will have to give advice about contraception. Even if he does not actually provide the means in his own consulting room, he must know the principles of the various methods and their short-comings and possible complications.

This book is easy to read, and when read, comfortable to digest; it represents at the moment the best British viewpoint on infertility and contraception, and will be acceptable to all grades of clinician from the medical students to the consultant.

SYNOPSIS OF REGIONAL ANATOMY, by T. B. Johnston, C.B.E., M.D. J. & A. Churchill, Ltd. 6th Edition, pp. viii + 436. Price 18s.

This manual requires no introduction to students. The general arrangement is as in previous editions, and new material has been added on the Extrapyramidal System and variously throughout the text. It is, as the author points out, a book from which to revise anatomy, region by region, and is not intended for those dissecting the cadaver for the first time.

Used in conjunction with drawings to be found in the larger text-books, it can be strongly commended to revision students.

TEXTBOOK OF GYNAECOLOGY, by Wilfred Shaw. J. and A. Churchill, Ltd. 5th Edition, 1948, pp. 660. Price 25s.

Neither Mr. Shaw nor his Textbook of Gynaecology require any introduction to Bart.'s men; both are familiar features of the landscape.

This new edition is some twenty pages larger than the last, and, although the arrangement is the same, much of it has been re-written to conform with current views. Ovarian tumours, for instance, are now classified on the basis of Schiller's and Meigs's work.

The book is clearly written and covers the subject very adequately. Its production is in keeping with the high standard associated with Messrs. Churchill.

QUEEN CHARLOTTE'S TEXTBOOK OF OBSTETRICS, by the Clinical Staff of the Hospital. J. & A. Churchill, Ltd., London. 7th edition, 1948, pp. 572. Price 28s.

This edition, appearing five years after the last, includes much new material and brings the work up to date. Despite the fact that there are many contributors, the editor has done his job well and the cohesion is good. This book can be recommended to all who are starting their midwifery.

AIDS TO TRAY AND TROLLEY SETTING, by Marjorie Houghton. Ballière, Tindall & Cox. 4th Edition, pp. xiii + 208. Price 5s.

AIDS TO SURGICAL NURSING, by Katherine Armstrong. Ballière, Tindall & Cox. 4th Edition, pp. xii + 432. Price 6s.

Both these books are well known in the "Aids" series. Miss Houghton has a compact subject to cover, and does it competently. "Aids to Surgical Nursing" is a courageous effort to cover a wide field, and suffers from the usual defects of a small book on a large subject. The pathology is confusing; gastroenterostomy is surely not the operation of choice for peptic ulcer; the section on methods of blood transfusion might well be cut.

MODERN PRACTICE IN PSYCHOLOGICAL MEDICINE, 1949. Edited by J. R. Rees. Published by Butterworth and Co. Ltd., London, 1949.

This book is beautifully printed on fine art paper and bound in the American style; it will, therefore, be a valuable article of export. It is, however, a little difficult to know what the publishers (or the editor, incidentally) expected this book to be. Is it to be regarded as a textbook? If so, it is hard to imagine a textbook by twenty-eight authors, all presenting different points of view. A good textbook should be the work of one author, or at the most of two who think alike and share a common literary style. In this connection, one is reminded of the Duke in Chesterton's play, "Magic," who was so "broad-minded" that whenever he sent a cheque on request to the Vegetarian League, say, would by the same post send a cheque for an equal amount to the Butchers' Benevolent Association. For instance, Dr. R. G. Gordon in chapter 2 gives us an account of the human psyche (twenty pages) largely in terms of McDougall and Jung. Chapter 3, which is supposed to interpret the human psyche with an "abnormal" slant, is by a member of the staff of the Tavistock Clinic and is undiluted and highly concentrated Freud and Melanie Klein. A textbook by one, or at the most two authors would present *a* point of view which could be judged on its own merits. Each of the contributors to this book could have written (and many of them have written) a book or books on their particular subjects; but, when they are expected to compress and condense to the dimensions of an article, what remains for the most part is doctrine without argumentation, which in the case of psychiatry is far from convincing. Nor is this book a well digested and synthesised précis of modern progress in psychiatry of the kind with which Messrs. Churchill's excellent "Recent Advances" series has made us so familiar. For example, to refer once more to Dr. Gordon's chapter, the references bear the following dates: 1928, 1923, 1917, 1923, 1948, 1923, 1923—only one reference later than 1928! In fact, hardly any of the "chapters" can be said to be fully up-to-date and continental work receives scant recognition.

Nevertheless, "Modern Practice in Psychological Medicine" will find a place in most medical libraries in virtue of its title and the distinction in the field of psychiatry of many of its contributors.

CLINICAL CASEBOOK

MYXOEDEMA

By M. B. McILROY, M.R.C.P.

Miss J. L., aged 26, came to hospital on March 8th, 1949, complaining of swelling of the legs.

One year previously she had developed a blister on her left foot which became infected and took three months to heal. The left leg had been swollen since then and for six months there had been swelling of right leg. For three months she had been gaining weight and had noticed dyspnoea on exertion, constipation and dryness of the skin. She had been unable to concentrate and had found difficulty in learning her parts for amateur dramatic performances. She had also noticed that she slept a lot, was lethargic and disliked the cold. There were no headaches and the menses were normal. Six years previously the patient had had an attack of hyperthyroidism lasting three months with a goitre, prominent eyes, irritability, loss of weight and nervousness. She had been treated with Phenobarbitone and the symptoms had disappeared. The patient's father has diabetes mellitus and has had a goitre for twenty years. He is now taking thyroid.

On examination the patient's general appearance suggested myxoedema. The face was puffy and the skin dry. She was intelligent, but rather slow both mentally and physically. The hair and eyebrows were normal. The eyes were slightly prominent but there was no lidlag. The fundi and visual fields were normal. The mucous membranes were slightly pale. There was no goitre. The heart was normal, the pulse rate 66 and the blood pressure 105/70. The only other abnormality was swelling of the ankles, which pitted slightly on pressure. The urine was normal.

The patient was admitted to hospital for investigation and the following results were obtained.

Haemoglobin 66% (Haldane), R.B.C. 3.7 millions per cu. mm., W.B.C. 6,900 per cu. mm., B.M.R. −36%, Blood Cholestrol 172 mg. and 202 mg./100cc. E.C.G. showed low voltage complexes with flat T waves. Chest X-ray showed normal heart and lungs. X-ray of skull was normal with a slightly small pituitary fossa. Glucose Tolerance curve was normal and 17 ketosteroid excretion was 1.6 mg. in 24 hours.

A diagnosis of myxoedema was made and the patient treated with Thyroad Extract gr. ½ daily. The dose was increased after a week to gr. 1 daily and the patient was discharged. She has since attended the outpatient department and the dose of thyroid has been increased.

There is no doubt that this patient has diminished Thyroid function, the B.M.R. and E.C.G. confirm the clinical diagnosis. The underlying cause is more difficult to determine. Hypothyroidism or myxoedema occurs either as a primary disease or secondary to changes in the thyroid or pituitary. Primary myxoedema is usually found in women after the menopause. The Thyroid gland is small and atrophic. There is some evidence of pituitary disturbance even in this condition as the 17 ketosteroids are low. The 17 ketosteroids reflect adrenal cortical activity and the low figures in myxoedema suggest that the disease is not due to simple thyroxine deficiency. It is possible that the pituitary may be responsible for the depression of both thyroid and adrenal activity. Secondary myxoedema may follow simple goitre, or fibrosis of the gland as in Hashimoto's disease. It may also follow partial thyroidectomy for thyrotoxicosis. Myxoedema following simple goitre is often due to iodine lack and is found in areas where goitre is endemic. Hypothyroidism secondary to pituitary destruction occurs in Simmond's disease and with pituitary tumours such as chromophobe adenomata, eosinophil adenomata and suprasellar cysts.

There is no evidence that this patient has secondary myxoedema. Although there is a past history of goitre, the thyroid is now normal in size. There has been no surgical intervention, and there is no evidence of pituitary destruction. Pituitary tumours can be excluded by the absence of pressure symptoms such as headaches, hemianopia or other visual disturbances and by the absence of radiological changes in the pituitary fossa. Simmond's disease produces a different clinical picture with amenorrhoea, wasting, a low blood sugar, a flat glucose tolerance curve and progeria in addition to hypothyroidism. It is likely then that this patient has developed primary myxoedema at an early age.

The occurrence of first hyperthyroidism and then myxoedema is of interest in relation to the surgical treatment of toxic goitre. If this patient had been operated upon when she had hyperthyroidism, the myxoedema would have been attributed to the operation.

The anaemia in this case was probably due to lack of thyroid as the colour index was normal. Anaemia in association with Myxoedema may be of three varieties. The commonest is iron deficiency anaemia due to blood loss from menorrhagia. The colour index in this variety is low. Pernicious anaemia with a high colour index is sometimes found in older patients. Occasionally the anaemia is due to thyroxine deficiency in which case it should respond to Thyroid Extract.

The normal values for the blood cholesterol are of some interest, as it is frequently said that a raised blood cholesterol is always found in myxoedema. A normal blood cholesterol and a normal E.C.G. do not exclude myxoedema.

There is some difference of opinion about amount of thyroid which should be given in the early stages of treatment. Cardiovascular changes have been seen in patients started on large doses of thyroid, so it is advisable to start with small doses. The dose can be increased later until the disease is controlled. The maintenance dose of thyroid varies and is usually of the order of 5 grains daily.

Summary. This patient had developed primary myxoedema at the early age of 26.

EXAMINATION RESULTS

UNIVERSITY OF OXFORD

2nd M.B. EXAMINATION

Forensic Medicine & Public Health — **Hilary Term, 1949**

Dossetor, J. B. — Widdicombe, J. G. — Godden, J. L. — Tallack, F. V.
Wheelwright, J. — *Glossop, M. W.

Special & Clinical Pathology — **Hilary Term, 1949**

Dossetor, J. B. — Tallack, F. V. — Widdicombe, J. G.

*Completed exam. for the degree M.B., B.Chir. (Cantab.).

UNIVERSITY OF LONDON

Special Second Examination for Medical Degrees — **March, 1949**

Albright, S. W.	Cox, W. H. A. C.	Hicks, J. P. N.	Pickard, A. M.
Blau, J. N.	Davies, G.	Hill, F. A.	Poole, G. H. G.
Bloom, M.	Davies, H. T.	Holbrook, B. W.	Romanes, J. L.
Boyse, E. A.	Davies, P. E.	Horsfall, B. E. C.	Singer, G. E.
Brown, H. E.	Dean, L. C.	Jenkins, D. G. W.	Stevenson, K. M.
Brown, J. R.	Derrington, M. M.	Jones, K.	Tarnoky, G. E. M.
Bruce, J. D.	Dodge, J. S.	Lascelles, B. D.	Thomas, B. D.
Brydson, M. D.	Dreaper, R. E.	Lewis, B.	Thomas, G. E.
Cave, J. D. H.	Finch, C. P.	Lockett, H. I.	Todd, J. N.
Charles, H. P.	Fitt, W. P.	Manuel, J.	Train, P.
Chia, A. K.	Frears, R. E.	Newill, R. G. D.	Vickers, R.
Chuck, V. R.	Gaskell, F.	Ogden, P. M.	Watts, M. B.
Clappen, J. A.	Girling, J. A.	Painter, N. S.	Williamson, P. J.
Clulow, G. E.	Gobert Jones, J. A.	Palmer, C. A. L.	Wilson, M. S.
Cook, J.	Haggett, R.	Parker, R. B.	Winser, M. A.
Coole, C. W.	Haigh, P. G.	Pearson, R. V.	Winston, F.

Second Examination for Medical Degrees (For External Students) — **March, 1949**

McDonald, I. R.

Examination for the Academic Postgraduate Diploma in Medical Radiology (Therapy) Part I — **March, 1949**

Emery, E. W.

Examination for the Academic Postgraduate Certificate in Public Health

Glanvill, A. T. H. — Mayers, J. R. — **April, 1949**

SOCIETY OF APOTHECARIES

FINAL EXAMINATION — March, 1949

Surgery

Horrocks, K. C. — Thompson, B. E. L.

Pathology

Horrocks, K. C.

Midwifery

Giri, G. A. R.

The following Candidate, having completed the Final Examination, is granted the Diploma of the Society.

Thompson, B. E. L.

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